

WHAT IS CLAIMED IS:

1. A method of inhibiting Fyn/Lck fatty acylation and protein palmitoylation in a cell in an individual in need of such
5 treatment comprising the step of administering to said individual a pharmacologically effective dose of 2-bromopalmitate.

2. The method of claim 1, where said 2-
10 bromopalmitate is administered in a dose of from about 0.1 mg/kg to about 100 mg/kg of total body weight of said individual.

3. The method of claim 1, where said 2-
15 bromopalmitate inhibits N-terminally palmitoylated proteins.

4. The method of claim 1, where said 2-
bromopalmitate inhibits myristoylation of proteins.

20

5. The method of claim 1, where said 2-
bromopalmitate inhibits T cell signalling events.

6. The method of claim 1, where said individual has a autoimmune disease.

5

7. The method of claim 1, where said autoimmune disease is selected from the group consisting of rheumatoid arthritis, Crohn's disease, diabetes, multiple sclerosis and systemic lupus erythematosus.

10

8. A method of treating an individual having a pathophysiological state comprising the step of administering to said individual a pharmacologically effective dose of 2-bromopalmitate.

15

9. The method of claim 8, where said 2-bromopalmitate is administered in a dose of from about 0.1 to about 100 mg/kg of total body weight of said individual.

20

10. The method of claim 8, where said 2-bromopalmitate inhibits N-terminally palmitoylated proteins.

11. The method of claim 8, where said 2-bromopalmitate inhibits myristoylation of proteins.

5 12. The method of claim 8, where said 2-bromopalmitate inhibits T cell signalling events.

13. The method of claim 8, where said individual has a
10 inflammatory disease.

14. The method of claim 8, where said disease is an
autoimmune disease.

15

15. The method of claim 14, where said autoimmune
disease is selected from the group consisting of rheumatoid arthritis,
diabetes, Crohn's disease, multiple sclerosis and systemic lupus
20 erythematosus.

16. A pharmaceutical composition comprising 2-bromopalmitate and a pharmaceutically acceptable carrier.